TCTAGACTGGACAGCATCCACAAGAGAAGCACCTAGAAGGAGAATTTTCCCCAGCAGCTTGCTCAGGACCC
TGCAGGAGCCGCAGCTGGGACTGGACCTGCTGTTAACCATGAACTCTTCCTGCTGCCTGTCTTCTGTTTCT
CCGATGCTGCCTAACCTCTCTGAGCACCCTGCAGCCCCTCCTGCCAGCAACCGGAGCGGCAGTGGGTTCTG
TGAGCAGGTCTTCATCAAGCCGGAGGTCTTCCTGGCTCTGGGCATCGTCAGTCTGATGGAAAACATCCTGG
TGATCCTGGCTGTGGTCAGGAATGGCAACCTGCACTCTCCCATGTACTTCTTCCTGTGCAGCCTGGCTGCA
GCCGACATGCTGGTGAGCCTGTCCAACTCCCTGGAGACCATCATGATCGCCGTGATCAACAGCGACTCCCT
GACCTTGGAGGACCAGTTTATCCAGCACATGGATAATATCTTCGACTCTATGATTTGCATCTCCCTGGTGG
CCTCCATCTGCAACCTCCTGGCCATTGCCATCGACAGGTACGTCACCATCTTCTATGCCCTTCGGTACCAC
AGCATCATGACAGTTAGGAAAGCCCTCACCTTGATCGGGGTCATCTGGGTCTGCTGCGGCATCTGCGGCGT
GATGTTCATCATCTACTCCGAGAGCAAGATGGTCATCGTGTGTCTCATCACCATGTTCTTCGCCATGGTGC
TCCTCATGGGCACCCTATATATCCACATGTTCCTCTTCGCCAGGCTCCACGTCCAGCGCATCGCAGTGCTG
CCCCCTGCTGGCGTGGTGGCCCCACAGCAGCACTCCTGCATGAAGGGGGCTGTCACCATCACTATCCTGCT
GGGTGTTTTCATCTTCTGCTGGGCGCCTTTCTTCCTCCACCTGGTCCTCATCATCACCTGCCCCACCAATC
CCTACTGCATCTGCTACACGGCCCATTTCAACACCTACCTGGTTCTCATCATGTGCAACTCCGTCATCGAC
CCCCTCATCTACGCCTTCCGCAGCCTGGAGCTGCGCAACACGTTCAAGGAGATTCTCTGCGGCTGCAACAG
CATGAACTTGGGCTAGGATGCCCGTGGAGGTGTTCCACATCCAGCCAAGAGACAAAAACAACGCTCAGACG
GGACGTAAAAGGGTGTTAGGAGCTGGAACTGTGCTTGGCTTCGTCTGTAAGCTCGTGGCCCTTTGCAGACG
GGACACGGCGTAGGATGGGCTGTCTGTGAGGATCTGTGTGTGGGTAAGTCAGTTTGATCTAGCACATAGCC
TGGAAGAATCAGGCAAAGCAGCCCTGAGTGTCATCTGTGTTCATTGCTAGGCACCCAGGGTTTGTGGCCCC
TGCCTGCTTATTGGCTTTGTACCAGTAACTGTGCTTCAAGCCAACCAGACCGGAGGGCTCTCGTGAGCAGA
AAGAGTGCTTAGACTTCCGGCAAGCATCCTGGCTCACAGCGGCCACCTCCTGACCACTACCGGGAGAGCTT
TGCACATATTCTGTGGGAGATTGAGTGAAGCCCTGAAAACAATGTGATATTTGCTGCTCCCTTCCAGAACT
TACATCTGTGCCAGCCTCCCCGAACCCCTGCACAGAGACATGACCCCCTTCTCCCTGTGCCGTTGTCATGG
TTGTTATTATTGTTGGAGTTTTGTTCGTTAAAATCTAAGCTT (SEQ ID NO:1)

MNSSCCLSSVSPMLPNLSEHPAAPPASNRSGSGFCEQVFIKPEVFLALGIVSLMENILVILAVVRNGNLHS
PMYFFLCSLAAADMLVSLSNSLETIMIAVINSDSLTLEDQFIQHMDNIFDSMICISLVASICNLLAIAIDR
YVTIFYALRYHSIMTVRKALTLIGVIWVCCGICGVMFIIYSESKMVIVCLITMFFAMVLLMGTLYIHMFLF
ARLHVQRIAVLPPAGVVAPQQHSCMKGAVTITILLGVFIFCWAPFFLHLVLIITCPTNPYCICYTAHFNTY
LVLIMCNSVIDPLIYAFRSLELRNTFKEILCGCNSMNLG (SEQ ID NO:2)

FIGURE 1

Underlined = deleted in targeting construct

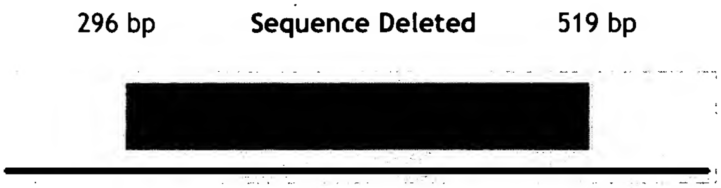
Bold = sequence flanking Neo insert in targeting construct

TCTAGACTGGACAGCATCCACAAGAGAAGCACCTAGAAGGAGAATTTTCCCCAGCAGCTT
GCTCAGGACCCTGCAGGAGCCGCAGCTGGGACTGGACCTGCTGTTAACCATGAACTCTTC
CTGCTGCCTGTCTTCTGTTTCTCCGATGCTGCCTAACCTCTCTGAGCACCCTGCAGCCCC
TCCTGCCAGCAACCGGAGCGGCAGTGGGTTCTGTGAGCAGGTCTTCATCAAGCCGGAGGT
CTTCCTGGCTCTGGGCATCGTCAGTCTGATGGAAAACATCCTGGTGATCCTGGCTGTGGT
CAGGAATGGCAACCTGCACTCTCCCATGTACTTCTTCCTGTGCAGCCTGGCTGCAGCCGA
CATGCTGGTGAGCCTGTCCAACTCCCTGGAGACCATCATGATCGCCGTGATCAACAGCGA
CTCCCTGACCTTGGAGGACCAGTTTATCCAGCACATGGATAATATCTTCGACTCTATGAT
TTGCATCTCCCTGGTGGCCTCCATCTGCAACCTCCTGGC**CATTGCCATCGACAGGTACGT**
CACCATCTTCTATGCCCTTCGGTACCACAGCATCATGACAGTTAGGAAAGCCCTCACCTT
GATCGGGGTCATCTGGGTCTGCTGCGGCATCTGCGGCGTGATGTTCATCATCTACTCCGA
GAGCAAGATGGTCATCGTGTGTCTCATCACCATGTTCTTCGCCATGGTGCTCCTCATGGG
CACCCTATATATCCACATGTTCCTCTTCGCCAGGCTCCACGTCCAGCGCATCGCAGTGCT
GCCCCCTGCTGGCGTGGTGGCCCCACAGCAGCACTCCTGCATGAAGGGGGCTGTCACCAT
CACTATCCTGCTGGGTGTTTTCATCTTCTGCTGGGCGCCTTTCTTCCTCCACCTGGTCCT
CATCATCACCTGCCCCACCAATCCCTACTGCATCTGCTACACGGCCCATTTCAACACCTA
CCTGGTTCTCATCATGTGCAACTCCGTCATCGACCCCCTCATCTACGCCTTCCGCAGCCT
GGAGCTGCGCAACACGTTCAAGGAGATTCTCTGCGGCTGCAACAGCATGAACTTGGGCTA
GGATGCCCGTGGAGGTGTTCCACATCCAGCCAAGAGACAAAAACAACGCTCAGACGGGAC
GTAAAAGGGTGTTAGGAGCTGGAACTGTGCTTGGCTTCGTCTGTAAGCTCGTGGCCCTTT
GCAGACGGGACACGGCGTAGGATGGGCTGTCTGTGAGGATCTGTGTGTGGGTAAGTCAGT
TTGATCTAGCACATAGCCTGGAAGAATCAGGCAAAGCAGCCCTGAGTGTCATCTGTGTTC
ATTGCTAGGCACCCAGGGTTTGTGGCCCCTGCCTGCTTATTGGCTTTGTACCAGTAACTG
TGCTTCAAGCCAACCAGACCGGAGGGCTCTCGTGAGCAGAAAGAGTGCTTAGACTTCCGG
CAAGCATCCTGGCTCACAGCGGCCACCTCCTGACCACTACCGGGAGAGCTTTGCACATAT
TCTGTGGGAGATTGAGTGAAGCCCTGAAAACAATGTGATATTTGCTGCTCCCTTCCAGAA
CTTACATCTGTGCCAGCCTCCCCGAACCCCTGCACAGAGACATGACCCCCTTCTCCCTGT
GCCGTTGTCATGGTTGTTATTATTGTTGGAGTTTTGTTCGTTAAAATCTAAGCTT
(SEQ ID NO:1)

FIGURE 2A

Gene Sequence
Structure *

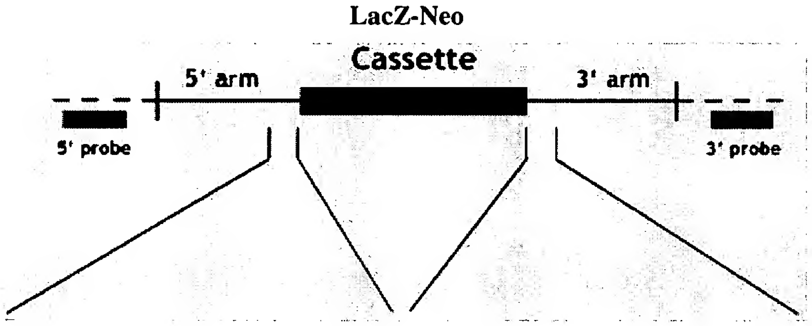
Size of CDS: 1675 bp



Targeting Vector* (genomic sequence)

Construct Number: 2787

Arm Length:
5': 1.6 kb
3': 4 kb



5'>ACCTGCTGTTAACCATGAACT CTTCCTGCTGCCTGTCTTCTGTTT CTCCGATGCTGCCTAACCTCTCTG AGCACCCTGCAGCCCCTCCTGCCA GCAACCGGAGCGGCAGTGGGTTCT GTGAGCAGGTCTTCATCAAGCCGG AGGTCTTCCTGGCTCTGGGCATCG TCAGTCTGATGGAAAACATCCTGG TGATCCTGGCT<**3'** (SEQ ID NO:3)	**5'**>CATTGCCATCGACAGGTACGT CACCATCTTCTATGCCCTTCGGTA CCACAGCATCATGACAGTGAGGAA AGCCCTCACCTTGATCGGGGTCAT CTGGGTCTGCTGCGGCATCTGCGG CGTGATGTTCATCATCTACTCCGA GAGCAAGATGGTCATCGTGTGTCT CATCACCATGTTCTTCGCCATGGT GCTCCTCATGG<**3'** (SEQ ID NO:4)

—— Targeting Vector
- - - - - Endogenous Locus

* Not drawn to scale

FIGURE 2B